UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

COBBLESTONE WIRELESS, LLC Plaintiff, v. CISCO SYSTEMS, INC. Defendant.	Case No. 2:23-cv-00454-JRG-RSP (Lead Case)
COBBLESTONE WIRELESS, LLC Plaintiff, v. HEWLETT PACKARD ENTERPRISE COMPANY, ARUBA NETWORKS, LLC Defendants.	Case No. 2:23-cv-00457-JRG-RSP (Member Case) **JURY TRIAL DEMANDED**

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

I. INTRODUCTION

Defendants Cisco Systems, Inc., Hewlett Packard Enterprise Company, and Aruba Networks, LLC (collectively, "Defendants") contend that the two claim terms in dispute need not be construed. Plaintiff's first proposed construction would have the Court deviate from the well-worn general rule that a preamble is non-limiting. None of Plaintiff's arguments support this departure. The claim limitations themselves define a structurally complete method and no later claim limitations refer back to "in a wireless communication channel" for antecedent basis. There is thus no reason to depart from the conventional rule that the preamble does not limit otherwise complete claims. The Plaintiff's second proposed construction would have the Court construe and add limitations to the term "center frequency." But "center frequency" is a well understood term in the art and need not be construed, as Plaintiff suggests, to read into the claim the additional limitation of "the frequency of the carrier that the baseband signal is upconverted to."

Notably, both of Plaintiff's proposed narrowing constructions are effectively copied and pasted from arguments it made in two separate IPRs as part of (misguided) attempts to avoid the cited prior art. *See Samsung Elecs. Am. v. Cobblestone Wireless, LLC*, IPR2024-00606, Paper 8, at 2-8 ("in a wireless communication channel" should be construed as limiting and limited to a single wireless communication channel); *Hewlett Packard Enterprise Co. v. Cobblestone Wireless, LLC*, IPR2024-00707, Paper 7, at 5-18 ("center frequency" should be construed as the "carrier signal frequency the baseband signal is up-converted to"). In its Institution Decisions, the PTAB rejected Plaintiff's first proposed construction in the *Samsung* matter, and declined to adopt the second in the *HPE* matter, finding construction unnecessary to decide institution. *See Samsung Elecs. Am. v. Cobblestone Wireless, LLC*, IPR2024-00606, Paper 13, at 11 ("Based on the present record, we preliminarily determine that Petitioner has made a sufficient showing for purposes of institution that the phrase 'a wireless communication channel' in the preamble of claim 1 and 10

is not limiting."); *Hewlett Packard Enterprise Co. v. Cobblestone Wireless, LLC*, IPR2024-00707, Paper 17, at 12 ("We determine that we do not need to resolve this claim construction issue for the purposes of institution . . . .")

Likewise, the Court should not adopt Plaintiff's proposed constructions here.

II. U.S. Patent No. 7,924,802 ("the '802 Patent")

The '802 Patent relates to methods of transmitting information in wireless communication channels. As the '802 Patent explains in the background section, prior art communication systems "generally contain one or more transmission channels to transmit data from the transmitter to the receiver." Dkt. 64-1 at 1:12-14. Figure 1 of the '802 Patent illustrates an example of a transmitter (element 100) used in a prior art wireless communication system:

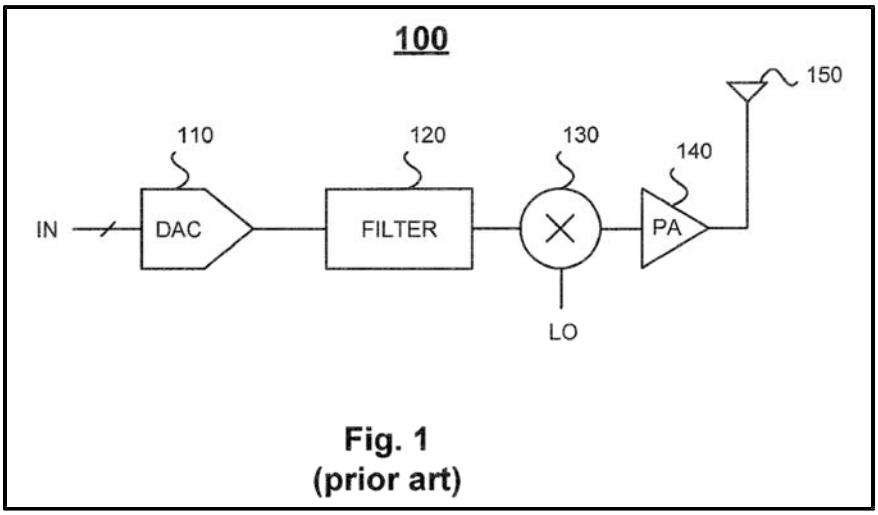

Fig. 1
(prior art)

Dkt. 64-1 at Fig. 1. In the context of Figure 1, element 110 is a "digital-to-analog converter" that "receives a digital input signal ("IN")" and converts it to an analog signal. Dkt. 64-1 at 1:18-24. Meanwhile, the "filter" (element 120) "may be used to remove undesirable frequencies and signal images." *Id*. The filter is coupled to a "mixer 130" that "may be used to up-convert the frequency of the signal by combining it with a local oscillator signal ("LO")." Dkt. 64-1 at 1:24-29. Finally,

the output of the mixer goes to the power amplifier (element 140) to "amplify the signal for transmission before it is sent through antenna 150." *Id.*

The '802 Patent identifies a problem with this prior art approach, which is that the "amount of information transmitted around the center frequency is limited by the bandwidth of the transmitter around the center frequency." Dkt. 64-1 at 1:29-35. The bandwidth thus "limits the amount of data that can be transmitted." *Id.* According to the '802 Patent, prior art approaches to improving transmission capacity focused on "maximizing the bandwidth around" this single center frequency. Dkt. 64-1 at 1:35-40. The '802 Patent's specification describes a wireless transmitter with two transmitter channels designed to transmit multiple signals at different center frequencies, as shown in Figures 2 and 3 ("an example of the frequency content of the transmitted signal 300 which may result from system 200"):

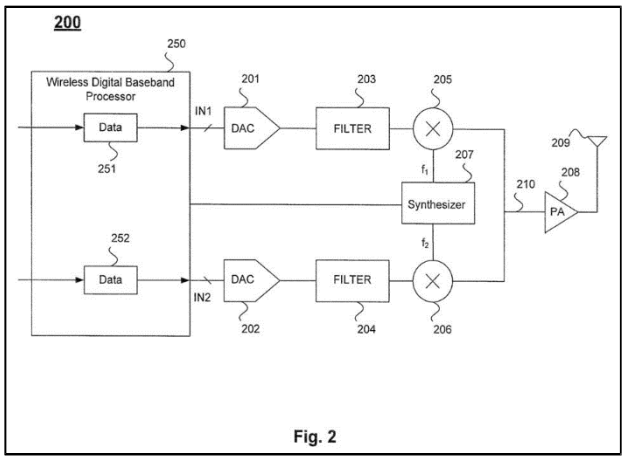

Fig. 2

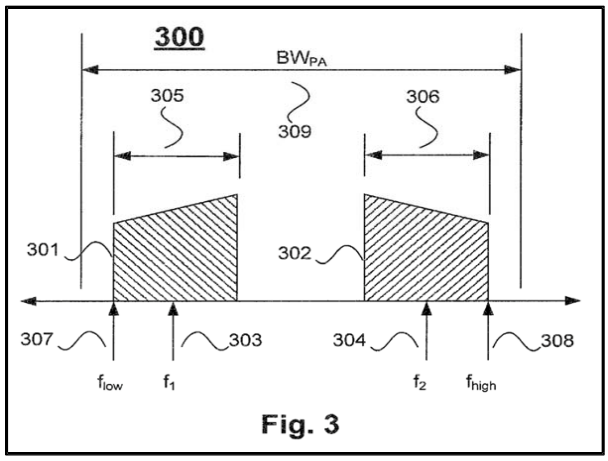

Fig. 3

Dkt. 64-1 at Figs. 2-3, 5:53-6:9, 6:60-63. The two paths of Figure 2 (top and bottom), represent different channels that data (251 and 252) can travel through before the multiple signals are transmitted 'simultaneously over a communication channel at different center frequencies' using one or more power amplifier 208 and antenna 209'" being "combined at the input of [power] amplifier 208 before amplification to produce a combined up-converted signal" and that "antenna

209 is coupled to the output of amplifier 208 to transmit the amplified ups converted signal as an electromagnetic signal." Dkt. 64-1 at 6:57-6:64.

The '802 Patent also describes the ability to "change" the "frequency content" of transmitted signals "within a bandwidth" of a power amplifier either "at irregular intervals or at regular intervals (periodically)." Dkt. 64-1 at 7:19-57. Figure 4 of the '802 Patent purports to illustrate these frequency changes:

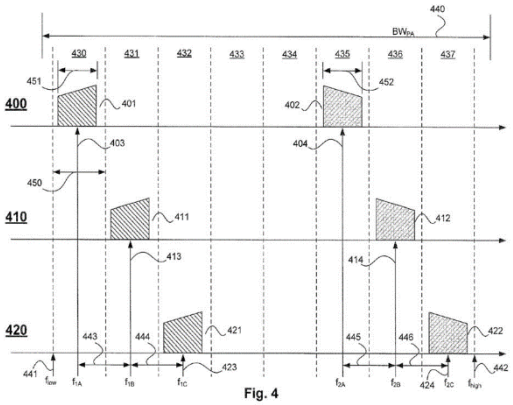

Fig. 4

Dkt. 64-1 at Fig. 4. By reference to Figure 3, the specification explains that the "change in frequency" may "result in a new frequency content 410 in which the signal 401 has moved in frequency as illustrated by signal 411 having an RF center frequency 413 (f1B), and the signal 402 has moved in frequency as illustrated by signal 412 having an RF center frequency 414 (f2B)." Dkt. 64-1 at 7:29-33. As a result, the "changes may move the RF signals to adjacent or non-adjacent locations," and the "spacing between the two RF center frequencies may remain the same or may vary." Dkt. 64-1 at 7:44-57.

III. DISPUTED CLAIM TERMS

A. Preamble: "A method of transmitting information in a wireless communication channel comprising…" (Claim 1)

Defendants' Proposed Construction	Plaintiff's Proposed Construction
No construction necessary	The preamble is limiting as to "in a wireless communication channel"

Plaintiff proposes a construction that deviates from two general principles of claim construction. Specifically, Plaintiff argues that (1) the preamble of claim 1 is limiting, ***and*** (2) the preamble's "a wireless communication channel" term is limited to a single channel. Pl's. Brief (Dkt. 64) at 1.

1. The Preamble of Claim 1 Is Not Limiting

"Generally, a preamble is not limiting." *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1292 (Fed. Cir. 2015). A preamble can be limiting if it "recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). However, if the patentee "defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention," the preamble is not limiting. *Id*.

Plaintiff argues, without support, that claim 1 "does not recite a complete structure" and further contends that the preamble's 'in a wireless communication channel' phrase is "necessary in imparting life and meaning to the claim." Dkt. 64 at 1-2. But nothing in the limitations of the claim requires "in a wireless communication channel" to supply structure to the claim. "In a wireless communication channel" does not supply antecedent basis for any term in the body of the claim. Moreover, using claim 1 as an example, the method is performed by transmitting information across first and second frequency ranges using the same wireless transmitter; no additional context, much less a limitation to "in a wireless communication channel" is required for the method to be complete. *See* Dkt. 64-1, at claim 1. Notably, the PTAB reached the same conclusion when it rejected the same argument Plaintiff makes here: "Based on the present record,

we preliminarily agree with Petitioner that the body of claims 1 and 10 recite a structurally complete invention." *Samsung Elecs. Am. v. Cobblestone Wireless, LLC*, IPR2024-00606, Paper 13, at 11.

The specification of the '802 Patent also makes clear that "a wireless communication channel" is not a structurally necessary limitation for method claim 1. For example, Figures 6, 7A and 7B are the only figures that depict methods (and map to claim 1). Yet, their corresponding descriptions in the specification do not mention "a wireless communication channel" at all. Dkt. 64-1 at 5:27-31, 9:9-10:61. The specification therefore confirms that the body of the claims recite a structurally complete invention, without resort to the preamble. There is thus no reason here to depart from the general rule that the preamble of an otherwise structurally complete invention is not limiting.

Plaintiff's secondary argument, that "statements of intended purpose in methods of using apparatuses" are generally limiting, fares no better. Dkt. 64, at 2. To the contrary, Plaintiff's citation to *Eli Lilly & Co. v. Teva Pharms. Int'l GmbH*, 8 F.4th 1331, 1341 (Fed. Cir. 2021) actually demonstrates why the preamble in this case is not limiting. In *Eli Lilly*, the claims were to methods for treating headaches, "comprising: . . . administering to the individual an effective amount of . . ." a drug. *Id.*at 1335. As the Federal Circuit explained, claims directed to a method of using a composition—such as a method of treatment claim—"typically rely entirely on what the method 'does'" and "what a method does is usually recited in its preamble." *Id.* at 1341. Put in terms of the claim at issue there, administering an "effective amount" of a composition can only be read in relation to the intended purpose of "administering": treating a headache. Under those circumstances, the Federal Circuit concluded that the "preambles give life and meaning to the 'effective amount' recited in the lone method step of each challenged claim." *Id.* at 1343. But the

court contrasted that situation with a method claim preamble like the one at issue here, that recites "merely a context in which the invention may be used." *Id.*at 1341 (quoting *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003)). A "context in which the invention may be used" is, of course, precisely what "in a wireless communication channel" is in the '802 Patent. *See Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1292 (Fed. Cir. 2015) (preamble of method claim not limiting where it "merely provides context for the limitations"). Indeed, even Plaintiff admits that the preamble provides mere context: "[T]he preamble's 'in a wireless communication channel' states the framework of the invention, and the context in which the specifically claimed transmission of information must take place." Dkt. 64, at 3. That is precisely why the preamble is ***non-limiting***, not the other way around.[1]

Accordingly, Plaintiff has not established that the "a wireless communication channel" limitation in the preamble of claim 1 is limiting.

2. "A" Means "One Or More"

In addition to arguing incorrectly that the "a wireless communication channel" phrase in the preamble is limiting, Plaintiff further proposes that this phrase should be limited to a single channel.

As a starting point, Plaintiff does not dispute the claim construction principle that "[a]s a general rule, the words 'a' or 'an' in a patent claim carry the meaning of 'one or more.'" *TiVo,*

[1] Likewise, *Eli Lilly* contrasted claims like the one before it—claims directed to "what a method does"—with claims reciting "what the method 'is,'" i.e., the steps necessary to complete it. In those contexts, like the claim here, a mere "statement of intended purpose" is not limiting because the method by itself is structurally complete. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371-72 (Fed. Cir. 2003) (preamble reciting a "method of gaining control of the boot procedure of a digital computer" not limiting because it "merely recites a purpose of the invention and does not add anything to the body of the claims"). The same goes for the claims of the '802 Patent, which recite transmitting steps that define a complete method, without reference to anything outside the claim body.

Inc. v. EchoStar Commc'ns Corp., 516 F.3d 1290, 1303 (Fed. Cir. 2008). The "exceptions to this rule are extremely limited: a patentee must evince a clear intent to limit 'a' or 'an' to 'one.'" *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008). Here, there is no such clear intent.

Plaintiff argues this principle "does not apply where the article 'a' appears before 'comprising,'" relying on the Federal Circuit's decision in *Convolve, Inc. v. Compaq Computer Corp.*, 812 F.3d 1313, 1321 (Fed. Cir. 2016). Dkt. 46, at 4. Plaintiff misunderstands the holding in *Convolve*, which did not turn on the article "a" appearing before "comprising." Instead, the court based its decision on the claim body's use of "'the processor,' referring back to the 'a processor' recited in preamble" which "supports a conclusion that the recited user interface is 'operatively working with' the same processor to perform all of the recited steps." *Id.* This was in contrast to claim 9, which recited "a processor" but not a subsequent "the processor," which was thus held to mean "one or more processors." *Id.* Contrary to Plaintiff's arguments, the court did ***not*** attach any significance to the term "a processor" appearing before the word "comprising." *Id.*; *see also Salazar v. AT&T Mobility LLC*, 64 F.4th 1311, 1317 (Fed. Cir. 2023) ("Claim 9 [in *Convolve*] … had no subsequent reference to 'the' or 'said' processor [and so] we interpreted 'a processor' to mean 'one or more processors'). Instead, the court found that the context of the claim as a whole evinced a "clear intent" for the "same processor to perform all the recited steps." *See Convolve*, 812 F.3d at 1321.

Indeed, Plaintiff's argument and mischaracterization of *Convolve* would, on its face, be such a broad exception that it would swallow the general rule that "a" means "one or more," and is inconsistent with Federal Circuit cases that have construed the article "a" to mean more than one even when appearing before "comprising." *See, e.g.*, *Braintree Laboratories, Inc. v. Novel*

Laboratories, 749 F.3d 1349, 1357 (Fed. Cir. 2014) (holding that construction of "a patient" in preamble to be a single patient "leads to [an] absurd result").

Plaintiff's argument is also inconsistent with the specification of the '802 Patent, which expressly contemplates embodiments that have more than one channel, stating that the received signal "may be processed in separate analog receiver ***channels*** and combined digitally." *Id.*, 10:51-53; *see also id.* at 1:13-15 ("Communication systems generally contain ***one or more*** transmission ***channels*** to transmit data from the transmitter to the receiver."). Thus, it is clear that Plaintiff has not "evince[d] a clear intent to limit 'a' or 'an' to 'one.'" *Baldwin Graphic Sys., Inc.*, 512 F.3d at 1342.

B. "first center frequency / second center frequency" (Claim 1)

Defendants' Proposed Construction	Plaintiff's Proposed Construction
Plain and ordinary meaning	The frequency of the carrier that the baseband signal is upconverted to

Plaintiff next asks the Court to redefine the well-understood term "center frequency" as "the carrier signal frequency the baseband signal is upconverted to," despite claim 1 making no reference to baseband signals or up-conversion. Plaintiff's construction is wrong because it diverges from the plain and ordinary meaning, attempts to import limitations from the specification, and is not supported by lexicography or disclaimer.

Tellingly, Plaintiff does not contend that it can meet the stringent standards for disclaimer or for the patentee acting as its own lexicographer with respect to "center frequency." Instead, Plaintiff tries to import from the specification the concept of an up-converted baseband signal based on what it argues is the inclusion of that concept in certain embodiments described in the specification. However, "[i]t is [] not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we

do not redefine words. Only the patentee can do that. To constitute disclaimer, there must be a clear and unmistakable disclaimer." *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012). Notably, the concept of up-conversion and/or up-convertors is present in numerous unasserted claims (i.e., claims 10-24), but is absent from all of the asserted claims (i.e., claims 1-4 and 7-9). In other words, the patentee understood how to draft claims incorporating the concept of up-conversion when it wanted to. Yet, Plaintiff tries to impermissibly import that concept into ***all*** of the claims, regardless of whether they require "up-converting" or not. Dkt. 64 at 6. That is improper.

As to Plaintiff's argument that the specification refers to up-converting baseband signals to center frequencies in several embodiments, the '802 Patent never defines or limits the claimed "center frequency" in those terms. Nor does the patent define the invention as requiring a first and second center frequency that each have been up-converted from a separate baseband signal. Instead, the patent uses permissive language ("may") throughout the specification when referring to up-conversion of a baseband signal. Likewise, the patentee disclosed an embodiment in which center frequencies are shifted within the frequency bandwidth of the power amplifier, which can include post-up-conversion shifting, *e.g.*, ". . . a new frequency content 410 in which the signal 401 has moved in frequency as illustrated by signal 411 having an RF center frequency 413 . . . ." Dkt. 64-1 at 7:29-31. In this embodiment, the center frequency may not be the carrier signal frequency to which the baseband signal was up-converted, i.e., signal 401. Plaintiff's proposed construction would contradict the specification.[2]

[2] Plaintiff's citation to *In re Abbott Diabetes Care Inc.*, 696 F.3d 1142 (Fed. Cir. 2012) does not support its argument. *Abbott* did not rely solely on the fact that embodiments in the specification limited the contested term to wireless sensors. Instead, the specification "contain[ed] ***only disparaging remarks*** with respect to external cables and wires of the prior-art sensors." *Id.* at 1149 (emphasis added). Where the "only mention" of a wired sensor was to highlight the "primary

Plaintiff's reliance on Professor Cooklev's Declaration does not save its argument. While Dr. Cooklev opines that the use of two center frequencies "is a major focus of the invention" (Dkt. 64-2 at ¶ 44), his opinion does not support Plaintiff's construction, which adds up-conversion and baseband signals. Claim 1 requires two center frequencies (one being higher than the other) and, therefore, center frequencies are part of the claimed invention. But that fact does not justify departing from the plain and ordinary meaning of center frequency, which is a frequency at the middle of the frequency range. *See, e.g.*, Ex. B, 47 C.F.R. § 22.99 (defining "center frequency" as "the frequency of the middle of the bandwidth of a channel"); 59 F.R. 59498, at 59507 (Nov. 17, 1994). To be sure, the claim language reinforces that plain and ordinary meaning by explicitly referring to "frequency range having a first center frequency, a first highest frequency, and a first lowest frequency." Dkt. 64-1, at claim 1. The "center frequency," then, is the middle of the "frequency range," i.e., between the "first highest frequency" and the "first lowest frequency." Dr. Cooklev does not analyze the term "center frequency" in the context of the surrounding claim language ***at all***, and even misleadingly omits the "first highest frequency" and "first lowest frequency" language from his discussion of what claim 1 "requires" in a misguided attempt to support his opinion. *See* Dkt. 64-2, at ¶ 37. As such, Dr. Cooklev's opinion does not support the argument that a POSITA would understand the plain and ordinary meaning of center frequency to be something other than the middle frequency of the frequency range recited in the claim.

Finally, Plaintiff tries to support its construction by claiming that the specification uses "center frequency" and "carrier frequency" "interchangeably" in a single embodiment. Dkt. 64, at

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deficiency of the prior art" the court concluded that the patentee had disclaimed wired sensors. In contrast, there is no similar disparagement of the ordinary meaning of "center frequency" in the specification of the '802 Patent, and Plaintiff does not identify any. Moreover, as explained above, the specification contains embodiments that are not consistent with the narrower definition Plaintiff urges.

11-12. This argument mistakes the proper use of the specification in claim construction. Notably, Plaintiff cites case law dealing with when "[d]ifferent terms or phrases in ***separate claims*** may be construed to cover the same subject matter," with one instance being where the specification treats them as such. *Virnetx, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1318-19 (Fed. Cir. 2014) (concluding that "secure communication link" and "VPN" should be construed consistently based on usage in specification).[3] That is a very different situation than the one at hand, in which ***no*** claim uses the term "carrier" or "carrier frequency"; those terms appear only in reference to the single embodiment Plaintiff references. Under those circumstances, where a term in an embodiment is used as an ***example*** of a center frequency, courts routinely decline to import the limitation of the narrower term into the more general one unless there is a "clear intention to limit the claim scope using words of expressions of manifest restriction or exclusion." *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011) (claim term did not include limitation referenced in one embodiment and drawings). Put simply, the patentee could have—but did not—use the term "carrier frequency" in place of center frequency in the claims. By choosing the broader term, its claims must be construed consistent with that usage, and not the self-serving limited construction that it now asks the Court to adopt.

Accordingly, the Court should adopt a plain and ordinary meaning for the well-understood term "center frequency."

[3] Similarly, the other two cases cited by Plaintiff for this point, *Baran v. Med. Device Techs, Inc.*, 616 F.3d 1309 (Fed. Cir. 2010) and *Haddad v. United States*, 164 Fed. Cl. 28 (2023) addressed situations in which the court was asked to determine whether separate terms in a claim were interchangeable, not whether to read a claim term as interchangeable with a broader term contained only in the specification.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a true and correct copy of the above and foregoing document has been served via the Court's ECF system on October 22, 2024.

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